

The adult fluke is at most not more than $\frac{1}{8}$ - $\frac{1}{4}$ in. in length. The alimentary canal has the usual form. The ovary is a racemose gland surrounding and opening into the part where the two ducts from the yolk-glands join and the uterus arises. The much-coiled uterus is full of ova with brown shell cases, and runs forward to open, not close to the male organs, but, as can be seen both in the whole animal and by means of a continuous series of transverse sections, anteriorly by the left side of the head sucker. The three adult animals examined agreed in this respect: in the whole animals the eggs could be traced forwards to the sucker, but this might of course have been due to their lying in a groove on the surface; sections showed that this was not so, but that the oviduct ran forward. The testes are two large oval bodies, one on each side of the ventral sucker. Their ducts unite and open in the usual position.

The excretory vesicle is well developed, and has strongly muscular walls. In sections the median canal can be traced as a single duct as far forwards as the ventral sucker.

(2) *On the presence of a Pentastomum parasitic in the Lung of the Copper-head Snake (Hoplocephalus superbus).*

My attention was first drawn to this arthropod by my friend and pupil, Mr. Dombain, who noticed its presence when cutting open a snake on King Island in November, 1887. Further searching showed me at once that the copper-head snakes of the island were infected by the parasite, which lives in their lungs. In one snake I counted no fewer than 129 specimens in the lung, and yet to all appearance this animal was perfectly healthy. When living they are of a bright red colour, due to the amount of blood sucked into the body from the lung of the snake.

The parasite lies with its head buried in the lung tissue and firmly attached by means of its four very definite hooks. The female, which is much the largest, measures when full-grown some 2 inches in length, and has from about 60-70 very distinct annulations on its body. The mouth is ventral and anterior, and apparently plugged by a somewhat triangular-shaped piece of tissue with chitinous edges. The anus

is posterior and terminal, and the generative opening placed ventrally some seven segments from the posterior end.

The male is much smaller and less frequently found than the female, from young forms of which it can easily be distinguished by the male genital opening, which is situated anteriorly on the ventral surface.

The body wall is composed of a very thick cuticle, through which open very numerous multicellular glands. Within the glandular layer, beneath the cuticle, lie the bands of circular and longitudinal muscles.

The alimentary canal consists of the œsophagus running upwards, lined with a definite cuticle, and opening on a papilla into the intestinal tube, which runs straight back dorsally to open at the terminal anus. The intestine is enclosed by the highly developed salivary (?) glands, which are formed of large nucleated cells, amongst which ramify numerous ducts. The ducts all unite on either side and run forwards into the head, the one of each side opening, apparently, on a slight papilla above the hooks.

In the female the ovary is single, and in the median line dorsally. Two oviducts unite at a point where are two bladder-like receptacula, and from here the uterus arises, which is much coiled and crowded with eggs, occupies a great part of the cœlom, and opens finally close to the posterior end.

The specimen resembles closely the form described by Leuckhart as *Pentastomum tenioides*, but is not quite similar to this apparently, and will be determined and described more fully subsequently.

(3) *On the structure and presence of the Cestode Amphipytyches parasitic in Callorhynchus Antarcticus.*
